REMARKS/ARGUMENTS

Claims 1-32 are pending. Claims 1-2, 5-7 and 29-31 have been allowed. Claims 3, 8, 25 and 32 have been amended. In view of the following, all of the claims are in condition for allowance. If, after considering this response, the Examiner does not agree that all of the claims are allowable, she is requested to schedule a teleconference with the Applicant's attorney to further the prosecution of the application.

Rejection of claims 3-4, 8-28 and 32 under §102(e) as being anticipated by Hull et al. (US 6,262,857)

Claim 3

Claim 3, as amended, recites servo wedges each detectable by a read head upon initial spin-up and identifying a respective data sector, and no zero-frequency spin-up fields associated with the servo wedges.

For example, referring, *e.g.*, to FIGS. 4 and 6 and paragraphs 22, 31, 34-52 and 54 of the present application, a servo wedge 22 includes a preamble 74, a servo synchronization mark (SSM) 76, head-location identifier 78 and bursts 84a-84n. A servo circuit 30 exploits the properties of a sinusoid to detect the preamble 74, searches for the SSM 76 within a predetermined time window, and then recovers the location identifier 78 which a head-position circuit 214 uses to determine an initial position of a read-write head 32. In this way, the direct detection of a first servo wedge 22 provides both an initial head position on disk spin-up and a head position during a read or write operation. As a result, the disk's data-storage capacity can be increased by reducing the number of, or altogether eliminating, spin-up servo wedges.

Hull, on the other hand, does not disclose servo wedges each detectable by a read head upon initial spin-up and identifying a respective data sector, and no zero-frequency spin-up fields associated with the servo wedges. Hull, at, *e.g.*, FIGS. 3A and 6 and the corresponding disclosure, discloses a disk drive that uses servo track segments 68, where each servo track segment 68 includes a servo address mark (SAM) 72. A SAM detector 376 is used to distinguish the SAM 72 from other data stored on the disk 14. However, the SAM detector 376 cannot locate the SAM 72 (and

hence, the servo track segment 68) during an initial positioning of a read-write head 20 without first detecting a predetermined "bit pattern" that "violates the run length constaints used to record all other data recorded on disk 14" (Col. 31, lines 3-5). Specifically, this bit pattern includes "a string of from 9-15 consecutive zeros" (Col. 31, lines 11-13). Such a "string of consecutive zeros" is also known in the art as a dc erase field or a zero-frequency field. After reviewing Hull in its entirety, the Applicant's attorney is unable find any mention of servo wedges each detectable by a read head upon initial spin-up and no zero-frequency spin-up fields associated with the servo wedges. Therefore, Hull does not satisfy the limitations of amended claim 3.

Claim 8

Claim 8, as amended, recites servo wedges detectable during an initial read-write head positioning, and no zero-frequency spin-up fields. As a result, claim 8 is patentable for reasons similar to those recited above in support of the patentability of claim 3.

Claim 14

Claim 14 recites a disk drive system comprising a processor coupled to a servo channel and operable to detect one of the servo wedges while or after the disk attains an operating speed but before the servo channel recovers servo data from any other of the servo wedges.

For example, referring, *e.g.*, to FIGS. 7, 11 and 12 and the corresponding disclosure in the present application, the processor 40 exploits the properties of a sinusoid to detect the preamble 74, and thus detect the servo wedge 22, before a servo channel 34 actually recovers any servo data. It should be noted that "detecting" servo data and "recovering" servo data are entirely different operations. The preamble 74 (and thus servo wedge 22) is detected by exploiting the properties of a sinusoid without actually recovering any servo data (logic 0's or 1's). Amplitude samples 140, 142 of the preamble sinusoid are taken and used to calculate a peak amplitude Y to determine detection of the preamble 74. Because the amplitude samples 140, 142 represent

analog values, no actual servo data (logic 0's or 1's) is recovered. As a result, the processor 40 is able to detect the preamble 74 (and thus servo wedge 22) before recovering any actual servo data.

Hull, on the other hand, does not disclose a disk drive system comprising a processor coupled to a servo channel and operable to detect one of the servo wedges while or after the disk attains an operating speed but before the servo channel recovers servo data from any other of the servo wedges. Instead, Hull must recover servo data (logic 0's or 1's) before detecting a servo wedge. As discussed above, Hull cannot locate the SAM 72 (and hence, the servo track segment 68) without first detecting a predetermined "bit pattern" that "violates the run length constaints used to record all other data recorded on disk 14" (Col. 31, lines 3-5). Specifically, this bit pattern includes "a string of from 9-15 consecutive zeros" (Col. 31, lines 11-13). In other words, Hull must recover a long sequence of servo data in the form of logic 0's before it is able to detect any servo wedge. Therefore, Hull does not satisfy the limitations of claim 14.

Claim 20

Claim 20 is patentable for reasons similar to those recited above in support of the patentability of claim 14.

Claims 25 and 32

Claims 25 and 32, as amended, are patentable for reasons similar to those recited above in support of the patentability of claim 3.

Claims 4, 9-13, 15-19, 21-24 and 26-28

Claims 4, 9-13, 15-19, 21-24 and 26-28 are patentable by virtue of their respective dependencies from independent claims 3, 8, 14, 20 and 25.

CONCLUSION

In light of the foregoing, claims 1-32 are in condition for allowance, which is respectfully requested.

In the event any fees are due as a result of this amendment, you are hereby authorized to charge such payment to Deposit Account No. 07-1897.

If, after considering this response, the Examiner does not agree that all of the claims are allowable, then it is respectfully requested that the Examiner schedule a phone interview with the Applicant's attorney, J. Mark Han or Bryan Santarelli, at (425) 455-5575.

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Respectfully submitted,

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